

PERIODIC TABLE OF THE ELEMENTS

Table of Selected Radioactive Isotopes

GROUP IA

1 1.0079
20.268
14.025
0.0899*

1s¹
Hydrogen

IIA

3 6.941
6.941
0.533

1s²2s¹
Lithium

4 9.01218
9.01218
1.85

1s²2s²
Beryllium

11 22.98977
22.98977
0.97

[Ne]3s¹
Sodium

12 24.305
24.305
1.74

[Ne]3s²
Magnesium

IIIA

IVA

VA

VIA

VIIA

VIIIA

VIIIA

IB

IIB

IIIB

IVB

VB

VIB

VIIA

VIIA

VIIA

19 39.0983
39.0983
0.86

[Ar]4s¹
Potassium

20 39.0983
39.0983
1.55

[Ar]4s²
Calcium

21 44.9559
44.9559
4.50

[Ar]3d¹4s²
Scandium

22 47.90
47.90
5.8

[Ar]3d²4s²
Titanium

23 50.9415
50.9415
5.8

[Ar]3d³4s²
Vanadium

24 51.996
51.996
7.19

[Ar]3d⁴4s²
Chromium

25 54.9380
54.9380
7.43

[Ar]3d⁵4s²
Manganese

26 55.847
55.847
8.80

[Ar]3d⁶4s²
Iron

27 58.9332
58.9332
8.80

[Ar]3d⁷4s²
Cobalt

28 58.9332
58.9332
8.80

[Ar]3d⁸4s²
Nickel

29 63.546
63.546
8.96

[Ar]3d⁹4s²
Copper

30 65.38
65.38
8.96

[Ar]3d¹⁰4s²
Zinc

31 69.72
69.72
7.14

[Ar]3d¹⁰4s¹
Gallium

32 72.59
72.59
5.91

[Ar]3d¹⁰4s²
Germanium

33 74.9216
74.9216
5.72

[Ar]3d¹⁰4s²
Arsenic

34 78.96
78.96
4.80

[Ar]3d¹⁰4s²
Selenium

35 79.904
79.904
3.12

[Ar]3d¹⁰4s²
Bromine

36 83.80
83.80
3.74

[Ar]3d¹⁰4s²
Krypton

37 85.4678
85.4678
1.53

[Kr]5s¹
Rubidium

38 87.62
87.62
2.6

[Kr]5s²
Strontium

39 88.9059
88.9059
4.5

[Kr]4d¹5s²
Yttrium

40 91.22
91.22
6.49

[Kr]4d²5s²
Zirconium

41 92.9064
92.9064
10.2

[Kr]4d³5s²
Niobium

42 95.94
95.94
11.5

[Kr]4d⁴5s²
Molybdenum

43 (99)
(99)
11.5

[Kr]4d⁵5s²
Technetium

44 101.07
101.07
12.2

[Kr]4d⁶5s²
Ruthenium

45 102.9055
102.9055
12.4

[Kr]4d⁷5s²
Rhodium

46 106.4
106.4
12.0

[Kr]4d⁸5s²
Palladium

47 107.868
107.868
10.5

[Kr]4d⁹5s²
Silver

48 112.41
112.41
8.65

[Kr]4d¹⁰5s²
Cadmium

49 114.82
114.82
7.31

[Kr]4d¹⁰5s¹
Indium

50 118.69
118.69
7.30

[Kr]4d¹⁰5s²
Tin

51 121.75
121.75
6.68

[Kr]4d¹⁰5s²
Antimony

52 127.60
127.60
6.34

[Kr]4d¹⁰5s²
Tellurium

53 126.9045
126.9045
4.92

[Kr]4d¹⁰5s²
Iodine

54 131.30
131.30
5.89

[Kr]4d¹⁰5s²
Xenon

55 132.9054
132.9054
1.87

[Xe]6s¹
Cesium

56 137.33
137.33
3.5

[Xe]6s²
Barium

57 138.9055
138.9055
5.7

[Xe]5d¹6s²
Lanthanum

72 178.49
178.49
13.1

[Xe]4f¹⁴5d¹6s²
Hafnium

73 180.9479
180.9479
15.6

[Xe]4f¹⁴5d²6s²
Tantalum

74 183.85
183.85
19.3

[Xe]4f¹⁴5d³6s²
Tungsten

75 186.207
186.207
21.0

[Xe]4f¹⁴5d⁴6s²
Rhenium

76 190.2
190.2
22.5

[Xe]4f¹⁴5d⁵6s²
Osmium

77 192.22
192.22
21.4

[Xe]4f¹⁴5d⁶6s²
Iridium

78 195.09
195.09
21.4

[Xe]4f¹⁴5d⁷6s²
Platinum

79 196.9665
196.9665
19.3

[Xe]4f¹⁴5d⁹6s¹
Gold

80 200.59
200.59
13.53

[Xe]4f¹⁴5d¹⁰6s¹
Mercury

81 204.37
204.37
11.85

[Xe]4f¹⁴5d¹⁰6s²
Thallium

82 207.2
207.2
11.4

[Xe]4f¹⁴5d¹⁰6s²
Lead

83 208.9804
208.9804
9.8

[Xe]4f¹⁴5d¹⁰6s²
Bismuth

84 (209)
(209)
9.4

[Xe]4f¹⁴5d¹⁰6s²
Polonium

85 (210)
(210)
9.1

[Xe]4f¹⁴5d¹⁰6s²
Astatine

86 (222)
(222)
9.1

[Xe]4f¹⁴5d¹⁰6s²
Radon

87 (223)
(223)
100

[Rn]7s¹
Francium

88 226.0254
226.0254
9.73

[Rn]7s²
Radium

89 227.0278
227.0278
10.07

[Rn]5f¹⁴7s²
Actinium

104 (261)
(261)
11.7

[Rn]5f¹⁴7s²
(Unnilquadium)

105 (262)
(262)
11.7

[Rn]5f¹⁴7s²
(Unnilpentium)

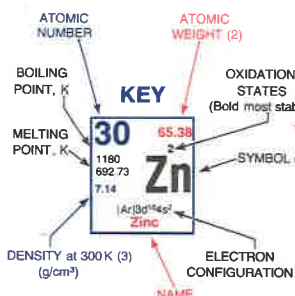
106 (263)
(263)
11.7

[Rn]5f¹⁴7s²
(Unnilhexium)

† The names and symbols of elements 104 - 106 are those recommended by IUPAC as systematic alternatives to those suggested by the purported discoverers. Berkeley (USA) researchers have proposed Rutherfordium, Rf, for element 104 and Hahnium, Hf, for element 105. Dubna (USSR) researchers, who also claim the discovery of these elements have proposed different names (and symbols).

The A & B subgroup designations, applicable to elements in rows 4, 5, 6, and 7, are those recommended by the International Union of Pure and Applied Chemistry. It should be noted that some authors and organizations use the opposite convention in distinguishing these subgroups.

* Estimated Values



58 140.12 140.12 6.78 Ce [Xe]4f ¹ 5d ¹ 6s ² Cerium	59 140.9077 140.9077 6.77 Pr [Xe]4f ³ 6s ² Praseodymium	60 144.24 144.24 7.00 Nd [Xe]4f ⁴ 6s ² Neodymium	61 (145) (145) 6.475 Pm [Xe]4f ⁵ 6s ² Promethium	62 150.4 150.4 7.54 Sm [Xe]4f ⁶ 6s ² Samarium	63 151.96 151.96 5.26 Eu [Xe]4f ⁷ 6s ² Europium	64 157.25 157.25 7.69 Gd [Xe]4f ⁷ 5d ¹ 6s ² Gadolinium	65 158.9254 158.9254 8.27 Tb [Xe]4f ⁹ 6s ² Terbium	66 162.50 162.50 8.54 Dy [Xe]4f ¹⁰ 6s ² Dysprosium	67 164.9304 164.9304 8.80 Ho [Xe]4f ¹¹ 6s ² Holmium	68 167.26 167.26 9.95 Er [Xe]4f ¹² 6s ² Erbium	69 168.9342 168.9342 9.33 Tm [Xe]4f ¹³ 6s ² Thulium	70 173.04 173.04 9.84 Yb [Xe]4f ¹⁴ 6s ² Ytterbium	71 174.967 174.967 9.84 Lu [Xe]4f ¹⁴ 5d ¹ 6s ² Lutetium
90 232.0381 232.0381 11.7 Th [Rn]6d ² 7s ² Thorium	91 231.0359 231.0359 15.4 Pa [Rn]5f ² 6d ¹ 7s ² Protactinium	92 238.0289 238.0289 18.90 U [Rn]5f ³ 6d ¹ 7s ² Uranium	93 237.0482 237.0482 20.4 Np [Rn]5f ⁴ 6d ¹ 7s ² Neptunium	94 (244) (244) 19.8 Pu [Rn]5f ⁶ 7s ² Plutonium	95 (243) (243) 13.6 Am [Rn]5f ⁷ 7s ² Americium	96 (247) (247) 13.511 Cm [Rn]5f ⁷ 6d ¹ 7s ² Curium	97 (247) (247) 13.5 Bk [Rn]5f ⁷ 7s ² Berkelium	98 (251) (251) 10.0 Cf [Rn]5f ¹⁰ 7s ² Californium	99 (252) (252) 11.4 Es [Rn]5f ¹¹ 7s ² Einsteinium	100 (257) (257) 11.4 Fm [Rn]5f ¹² 7s ² Fermium	101 (258) (258) 11.4 Md [Rn]5f ¹³ 7s ² Mendelevium	102 (259) (259) 11.4 No [Rn]5f ¹⁴ 7s ² Nobelium	103 (260) (260) 11.4 Lr [Rn]5f ¹⁴ 6d ¹ 7s ² Lawrencium

NOTES:
(1) Black — solid.
Red — gas.
Blue — liquid.
Outline — synthetically prepared.

(2) Based upon carbon-12. (1) indicates most stable or best known isotope.
(3) Entries marked with asterisks refer to the gaseous state at 273 K and 1 atm and are given in units of g/l.



SARGENT-WEICH SCIENTIFIC COMPANY
7300 NORTH LINDER AVENUE, SKOKIE, ILLINOIS 60077

Catalog Number S-18806

Side 1

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